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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/976,725	10/12/2001	Casimer M. DeCusatis	FIS920010131US1(14564)	2486
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Steven Fischman, Esq. Scully, Scott, Murphy & Presser 400 Garden City Plaza Garden City, NY 11530		EXAMINER CURS, NATHAN M		
		ART UNIT PAPER NUMBER		
		2613		
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

09/976,725

Applicant(s)

DECUSATIS ET AL.

Examiner

Nathan Curs

Art Unit

2613

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 June 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-20 is/are rejected.
- 7) ☒ Claim(s) 2 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
- ☐ Notice of Informal Patent Application
- ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claim 1 is objected to because of the following informalities:

Lines 5-7 recite dithering the center wavelength of *each* channel about the center of *the* optical filter bandpass and then passing each channel through *the* filter. What is implied here, but not clearly established, is that there is 1:1 relationship between channel wavelength and filter. So for n wavelengths, there are n filters. The claim should use language to the effect of dithering each wavelength about the center of a *respective* optical filter bandpass (and then passing each channel through its *respective* filter bandpass). Further, line 11 recites "adjusting wavelengths of optical signals in the network"; however, the claim should recite adjusting wavelengths of *the* optical signals in the network, since the adjusting is happening to the same wavelengths of the channels that are recited elsewhere in the claim.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 3-20 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Art Unit: 2613

Claims 3, 11 and 18, and depending claims, recite sending a plurality of wavelengths through a single filter; the specification does not enable this concept. The specification only supports a 1:1 relationship between wavelength and filter, not an N:1 relationship.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1, 3, 11 and 18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps. See MPEP § 2172.01. Claim 1 recites "employing a dither feedback mechanism" and claims the step of dithering the center wavelength of each channel, the step of passing each channel through the filter "to obtain a measurement of the [OTF]", and the step of then feedback-adjusting each channel wavelength as a result of the OTF measurement. However, more than just these three steps are required in "employing a dither feedback mechanism" and "to obtain a measurement of the [OTF]". According to the specification, deploying a feedback mechanism and obtaining an OTF measurement further requires that the dither portion of the transmitted wavelength is detected (requiring O/E conversion) and then mixed with a reference dither signal of the same dither frequency. Unless these further steps occur, the dither feedback mechanism is not fully functional nor the OTF measurement obtained, because the dithering is not useful for these results until it is detected and mixed with the reference dither signal.

Claim 3 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps. Claim 3 recites

Art Unit: 2613

“tracking changes to said set of signals” and claims the step of dithering the center wavelength of each channel, the step of passing each channel through the filter “to obtain a measurement of the [OTF]”, and the step of then feedback-adjusting each channel wavelength as a result of the OTF measurement. However, more than just these three steps are required in fully “tracking changes to said set of signals”. According the specification, tracking changes to the signals further requires that the dither portion of each transmitted wavelength is detected (requiring O/E conversion) and then mixed with a reference dither signal of the same dither frequency. Unless these further steps occur there is no actual tracking possible because the dithering is not useful for tracking until it is detected and mixed with the reference dither signal.

Claims 11 and 18 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential elements and essential structural cooperative relationships of elements, such omission amounting to a gap between the elements. See MPEP § 2172.01. Claims 11 and 18 recite “a tracking circuit to track changes to said set of signals” and adjust wavelengths as a result. The claims each recite a bandpass filter, means for dithering the center wavelength of each channel, and a control for “using the filter output signals” to adjust each channel wavelength. However, a fully functional tracking circuit requires more than just these claimed elements. According to the specification, a functional tracking circuit further requires a detector for detecting the dither portion of each transmitted wavelength (requiring O/E conversion), a reference dither signal of the same dither frequency, a mixer for mixing the detected dither signal with the reference dither signal and a feedback connection for the wavelength adjustments. Unless the tracking circuit has these further elements in proper relationship, the tracking circuit is not functional

Allowable Subject Matter

6. Claim 1 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, and the objections, set forth in this Office action.

7. Claim 2 is objected to for depending on a rejected base claim, but would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, and the objections, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Response to Arguments

8. Applicant's arguments filed 13 June 2007, with respect to the rejections under 35 USC § 112-1st paragraph, have been fully considered but they are not persuasive. Despite the claim amendments, claims 3, 11 and 18, and depending claims, still recite an N:1 relationship between wavelengths and a filter.

9. Applicant's arguments, based on the claim amendments that recite maintaining a transfer function by equalizing the optical signals via wavelength adjustments, have been fully considered and are persuasive with respect to Roberts. Roberts discloses wavelength dithering, but for suppressing SBS, not for maintaining a transfer function of optical signals. The rejections based on Roberts have been withdrawn.

Art Unit: 2613

Conclusion

10. Any inquiry concerning this communication from the examiner should be directed to N. Curs whose telephone number is (571) 272-3028. The examiner can normally be reached on M-F (from 9 AM to 5 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan, can be reached at (571) 272-3022. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (800) 786-9199.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pairedirect.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



SHI K. LI
PRIMARY PATENT EXAMINER